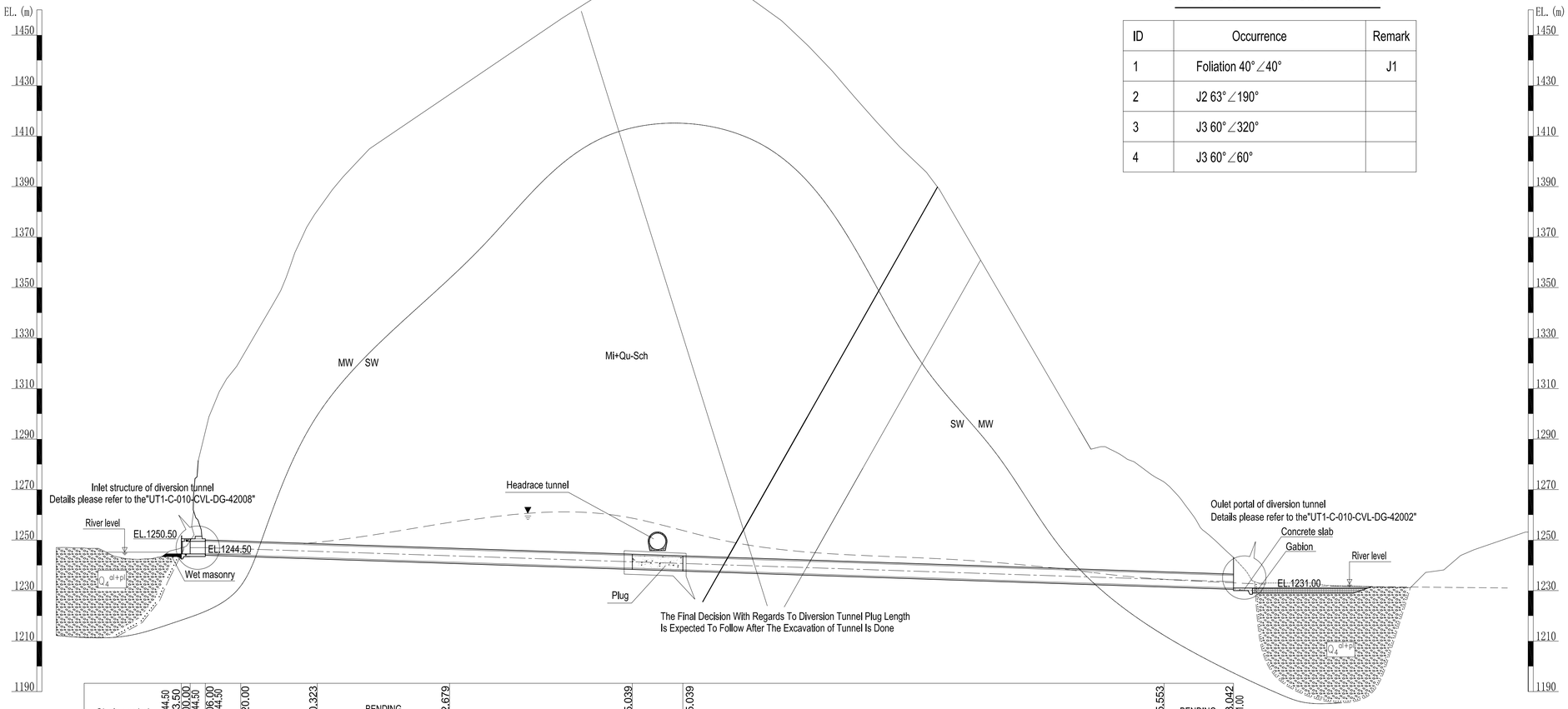
Longitudinal Profile of Diversion Tunnel

Scale 1:1000



Chainage(m)	EL.1244.50	D0+003.50	D0+000.00	EL.1244.50	D0+006.00	EL.1244.50	D0+020.00	D0+050.323	BENDING SECTION	D0+102.679	D0+175.039	PLUG	D0+195.039	D0+385.553	BENDING SECTION	D0+413.042	EL.1231.00
Gradient		0%			3.32%												
Rock class type	D		C		III		III~II				E	III~II	IV	III		IV	C
Support type					B		A~B					A~B	C	B		C	
	D0+000.00	Certain	D0+006.00	Certain	D0+020.00	Tentative	D0+064.115	Tentative		D0+175.039	Certain	D0+195.039	Tentative	D0+207.590	Tentative	D0+226.935	Tentative	D0+346.500	Tentative	D0+385.553	Certain	D0+413.042
Overburden thickness (m)			80.00		149.60							222.37					64.60					

Rev.0C

Joint Sets of Diversion Tunnel

ID	Occurrence	Remark
1	Foliation 40°∠40°	J1
2	J2 63°∠190°	
3	J3 60°∠320°	
4	J3 60°∠60°	

SCALE:
1:1000 0 10 20 30 40 50m

NOTE

1. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
2. The excavation and support types of diversion tunnel can be adjusted by the designer according to the actual situation after the geological conditions are revealed.
3. Symbol description:
   A-Line is the design excavation line;
   B-Line is the overbreak line;
   D-denotes deformed bar, yield strength of the deformed bar is 500MPa.
4. Strength specification of concrete & shotcrete:
   (1) Concrete class E: Cylinder specified compressive strength 24MPa at 28 days.
   (2) Shotcrete: Cylinder specified compressive strength 25MPa at 28 days.

Rev.0C

REFERENCE DRAWINGS

UT1-C-010-CVL-DG-42001	Arrangement Drawing Of Diversion Tunnel
UT1-C-010-CVL-DG-42002	Excavation and Support Drawing of Inlet and Outlet Portal of Diversion Tunnel
UT1-C-010-CVL-DG-42008	Outline of Diversion Tunnel Intake Tower
UT1-C-010-CVL-DG-42007	Diversion Facilities Outline Drawing of diversion tunnel plugging

SYMBOL AND LEGEND

FOR APPROVAL

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE PRELIMINARY FOR APPROVAL.
IT CAN BE CHANGED IN THE EXECUTION STAGE
THIS DRAWING IS THE PROPERTY OF DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO., LTD.
IT IS NOT TO BE COPIED OR USED IN ANY WAY DETRIMENTAL TO THE COMPANY.

REV. NO.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
0C	18.MAY,2022	Third issue	DONG Z.Z.	K.J.KIM	Y.S.SON
0B	30.DEC,2021	Second issue	DONG Z.Z.	K.J.KIM	Y.S.SON
0A	17.AUG,2021	First issue	DONG Z.Z.	K.J.KIM	Y.S.SON

PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC NEPAL WATER AND ENERGY DEVELOPMENT CO. PVT.LTD.

OWNER'S ENGINEER
TRACTEBEL ENGIE
jade CONSULT

CONTRACTOR
DOOSAN Enerbility

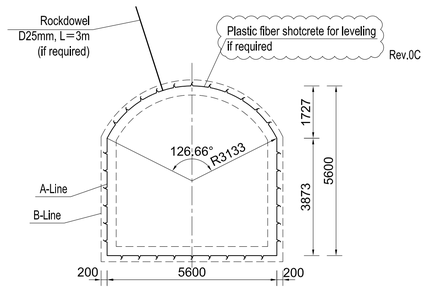
DRAWING TITLE
EXCAVAITON AND INITIAL SUPPORT DRAWING OF DIVERSION TUNNEL(1/2)

DRAWING NUMBER	SHEET NO.	REV. NO.
UT1-C-010-CVL-DG-42003-1	1 OF 2	0C

A1 (594 x 841 MM)

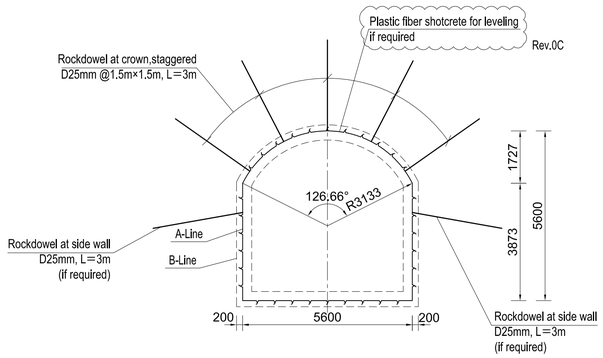
Support Type A (class II)

Scale 1:100



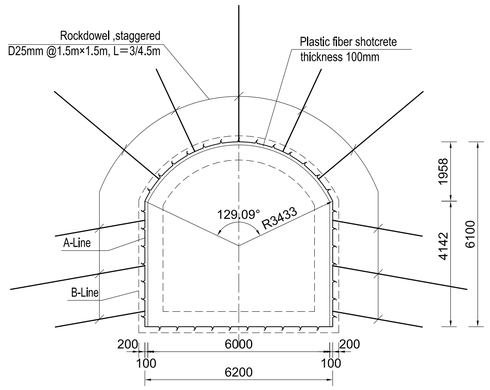
Support Type B (class III)

Scale 1:100



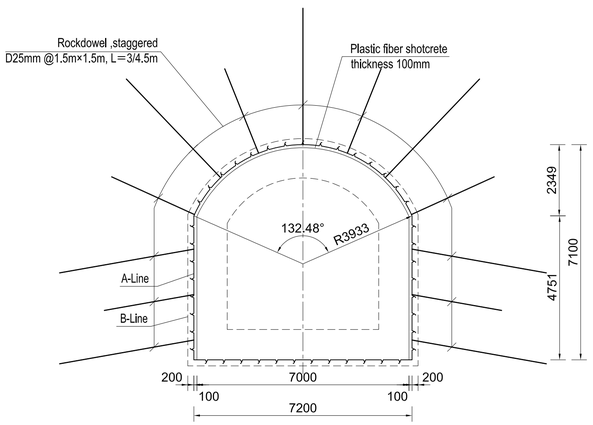
Support Type C (class IV)

Scale 1:100



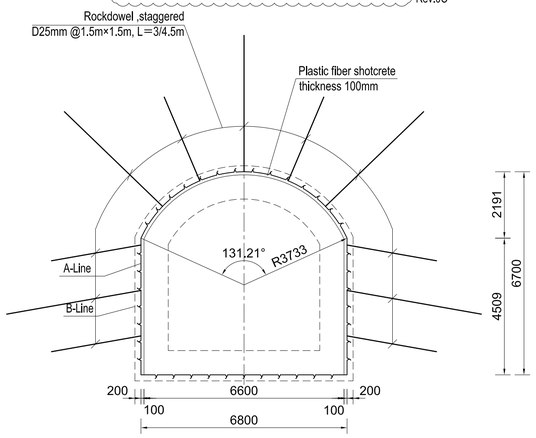
Support Type D

CHAINAGE D0+00.000-D0+06.000
Scale 1:100



Support Type E
(Intersection of Headrace and Diversion Tunnel)

CHAINAGE D0+175.039-D0+195.039
Scale 1:100 Rev.0C



SAFETY INSTRUCTION:

1. THE WORKERS WHO EQUIPPED WITH THE NECESSARY SAFETY PROTECTION MEASURES SHOULD BE FAMILIAR WITH AND COMPLY WITH THE SAFETY RULES FOR CONSTRUCTION, AND MUST ADHERE THE "SAFETY FIRST, PREVENTION FIRST, COMPREHENSIVE MANAGEMENT" APPROACH, TO ENSURE SAFETY ON SITE ;
2. IT 'S FIRST THAT CHECKING THE PROCESSING EQUIPMENT IS NORMAL OPERATION OR NOT, FOR THE PRODUCTION AND THE PERSONAL SAFETY DURING STEEL PROCESSING ,THE OPERATOR SHOULD STRICTLY ABIDE BY THE SCHEDULED OPERATION PROCEDURES ;
3. IT'S REQUIREMENT THAT WELDING MACHINES ARE RELIABLE TO CONNECT GROUND, AND INSULATED CABLES ARE EQUIPPED WITH LEAKAGE PROTECTOR; IT IS STRICTLY PROHIBITED TO THE OPERATION, AND SHOULD WEAR PROTECTIVE GLASSES AND OTHER NECESSARY PROTECTIVE EQUIPMENT DURING STEEL INSTALLING;
4. SECURITY WARNING SIGNS SHOULD BE SET WHEN STEEL LIFTING, THE TEMPORARY LOCATION AND ANTI DUMPING SUPPORT SHOULD BE SAFE AND RELIABLE, SCAFFOLDING, CONSTRUCTION PLATFORM AND CHANNEL SHOULD BE BINDING ;
5. THE WORKERS SHOULD PAY ATTENTION TO THE EXISTENCE UNSAFE AREAS IN THE COURSE OF CONSTRUCTION , AND TAKE PREVENTIVE MEASURES IN TIME.

SCALE:
1:100 0 1 2 3 4 5m

NOTE

1. All dimensions are in millimeters, and coordinates, chainages & elevations are in meters.
2. The excavation and support types of diversion tunnel can be adjusted by the designer according to the actual situation after the geological conditions are revealed.
3. Symbol description:
   A-Line is the design excavation line.
   B-Line is the overbreak line.
   D denotes deformed bar, yield strength of the deformed bar is 500MPa;
4. Strength specification of concrete & shotcrete:
   (1) Concrete class E: Cylinder specified compressive strength 24MPa at 28 days.
   (2) Shotcrete: Cylinder specified compressive strength 25MPa at 28 days.

REFERENCE DRAWINGS

UT1-C-010-CVL-DG-42001	Arrangement Drawing Of Diversion Tunnel
UT1-C-010-CVL-DG-42002	Excavation and Support Drawing of Inlet and Outlet Portal of Diversion Tunnel
UT1-C-010-CVL-DG-42008	Outline of Diversion Tunnel Intake Tower
UT1-C-010-CVL-DG-42007	Diversion Facilities Outline Drawing of diversion tunnel plugging

SYMBOL AND LEGEND

FOR APPROVAL

THIS DRAWING AND THE INFORMATION CONTAINED HEREIN ARE PRELIMINARY FOR APPROVAL. IT CAN BE CHANGED IN THE EXECUTION STAGE
THIS DRAWING IS THE PROPERTY OF DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO., LTD. IT IS NOT TO BE COPIED OR USED IN ANY WAY DETRIMENTAL TO THE COMPANY.

REV. NO.	DATE	DESCRIPTION	DRAWN	CHKD.	APPD.
0C	18.MAY,2022	Third issue	DONG Z.Z.	K.J.KIM	Y.S.SON
0B	30.DEC,2021	Second issue	DONG Z.Z.	K.J.KIM	Y.S.SON
0A	17.AUG,2021	First issue	DONG Z.Z.	K.J.KIM	Y.S.SON

PROJECT TITLE
Upper Trishuli-1 HEP (216MW)

OWNER
NWEDC NEPAL WATER AND ENERGY DEVELOPMENT CO. PVT.LTD.

OWNER'S ENGINEER
TRACTEBEL ENGIE JADE CONSULT

CONTRACTOR
DOOSAN Enerbility

DRAWING TITLE
EXCAVAITON AND INITIAL SUPPORT DRAWING OF DIVERSION TUNNEL(2/2)

DRAWING NUMBER	SHEET NO.	REV. NO.
UT1-C-010-CVL-DG-42003-2	2 OF 2	0C

A1 (594 x 841 MM)